

PLANNING FOR RENEWABLE ENERGY DEVELOPMENT

**NH Office of Energy and Planning's
13th Annual Spring Planning and Zoning
Conference**

Manchester NH April 1, 2006

PRESENTERS

- **Joseph C. Broyles, Energy Program Manager - NH Office of Energy and Planning**
- **Robert A. Danderson, Mayor - City of Berlin**
- **Mark Adams, Planning Board Chair - Town of Lempster**

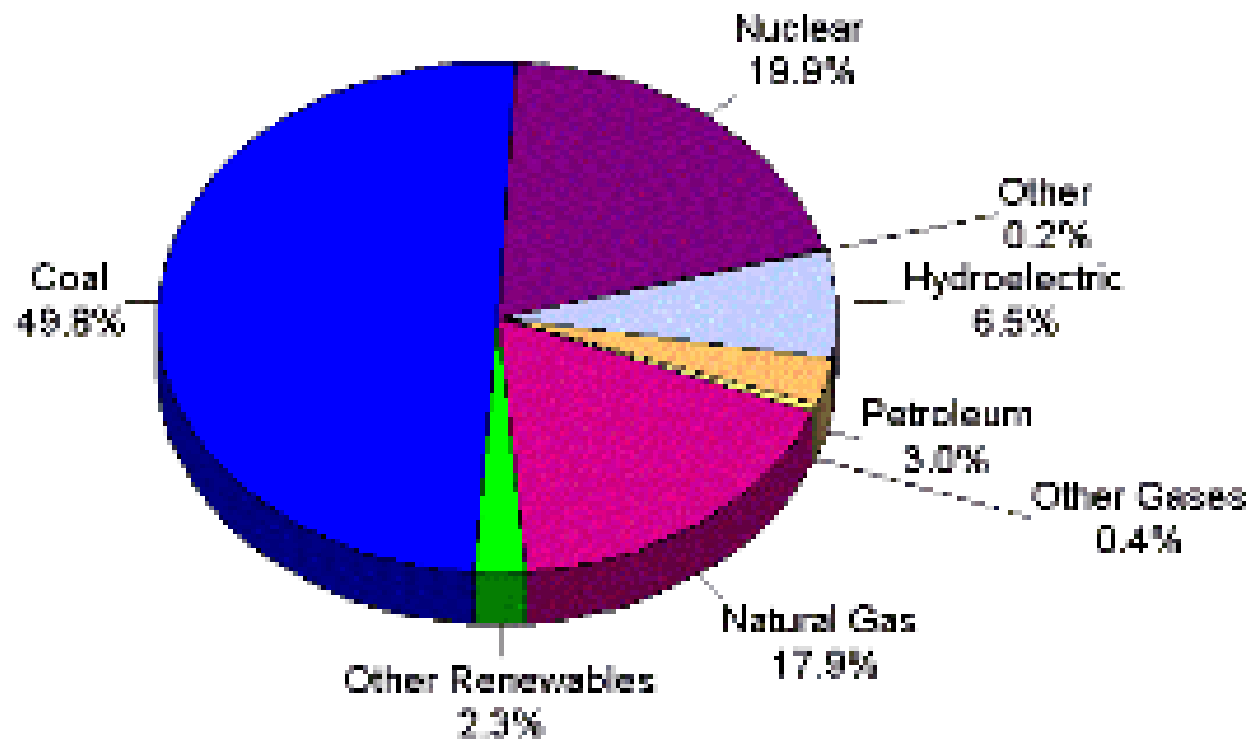
SESSION OVERVIEW

- Energy: the Big Picture
- Berlin Wind Project
- Lempster Wind Project
- Q&A

THE BIG PICTURE

- US: 5% of world population
- US: 25% of world energy demand
- **US Imports 61% of its oil (54%, 1970s)**
- Global oil production capacity exceeds demand by about 1.5-2%
- 90% of planned new electricity generation in US as of 2001 was based on natural gas; US supplies and pipelines cannot meet demand
- Growing worldwide competition for energy

ENERGY SOURCES FOR US ELECTRICITY GENERATION



Spurce: <http://www.eia.doe.gov/fuelelectric.html>

WHY THE DEMAND FOR MORE RENEWABLE SOURCE ELECTRICITY

- Unsustainable US energy demand
- Dollars exported to purchase energy distort our economy (Example: trade imbalance)
- Energy demand and costs reduce US competitiveness in global markets
- Health impacts of air pollution
- Global climate change concerns
- Energy availability/security concerns

SOME RESPONSES

- Five New England states have renewable portfolio standards (RPS)
- Renewable portfolio standard bills in New Hampshire legislature (HB 1146, SB 314)
- Talk of a federal renewable portfolio standard
- Public interest in purchasing electricity from renewable energy sources
- 2006 State of the Union Address: Promoted renewable energy

RENEWABLE ENERGY DEVELOPERS SEE NEW HAMPSHIRE POTENTIAL:

- Abundant hydro, wind, solar and biomass resources
- Proximity to grid and to demand centers
- Relatively low land values and development costs
- NH electricity and renewable energy credits (RECs) can be sold to satisfy RPS requirements in other states
- Possibly fewer compliance barriers
- Possibly more positive local reception

NH WIND RESOURCE IS ATTRACTIVE TO DEVELOPERS:

- Good wind resource
- Well-distributed wind resource

BUT COMMUNITIES VARY IN THEIR
RECEPTION OF PROPOSED PROJECTS

EACH RENEWABLE ENERGY TYPE HAS
UNIQUE ISSUES, YET THEY SHARE MANY
OTHERS. WIND'S PROMINENCE MAKES
IT A GOOD SUBJECT FOR PLANNING
CONSIDERATIONS, BOTH GENERAL AND
WIND-SPECIFIC

HISTORICAL NOTE

- The world's first commercial wind farm (1980) was in NH on Crotched Mountain

THE ISSUES WILL NOT GO AWAY

- None of the cited big-picture conditions and renewable energy drivers appear likely to change in the foreseeable future
- If anything, they will intensify the interest in renewable energy development
- Options available to cities and towns:
 - Do nothing, live in a future shaped by others
 - Become educated and make informed decisions to shape the future

BERLIN AND LEMPSTER

Apples and Oranges or Useful Comparison?

- Berlin
 - City
 - Zoning
 - Small wind project
 - Project welcomed
- Lempster
 - Town
 - No Zoning
 - Large wind project
 - Project controversial

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